

WE CLAIM:

1. A method for automatically testing the video display functionality of a computer video card, comprising:

storing a first computer displayable image in a first memory context;
passing the image through a computer video card for displaying on a computer display monitor;
displaying the image on the computer display monitor;
capturing the displayed image and storing the captured displayed image to a second memory context;
comparing the first stored image to the second stored image to determine whether the second stored image is substantially the same as the first stored image after the first image is displayed on the computer display monitor; and
if the first stored image is not substantially the same as the second stored image, designating the computer video card as failing a video test.

2. The method of Claim 1, prior to storing a first computer displayable image in a first memory context, generating a bitmap of the first computer displayable image for storing in the first memory context.

3. The method of Claim 1, whereby comparing the first stored image to the second stored image includes comparing the first stored image to the second stored image on a pixel-by-pixel basis.

4. The method of Claim 3, whereby if any pixel of the second stored image is different from a corresponding pixel of the first stored image, designating the computer video card as failing the video test.

5. The method of Claim 4, whereby if less than a threshold number of pixels of the first stored image are different than the second stored image, designating the computer video card as passing the video test.

6. The method of Claim 5, further comprising the steps of:
after comparing the first stored image to the second stored image to determine whether the second stored image is substantially the same as the first stored image, changing the resolution of the first stored image;
storing the first stored image having the changed resolution in the first memory context;
passing the first stored image having the changed resolution through a computer video card for displaying on a computer display monitor;
displaying the first stored image having the changed resolution on the computer display monitor;
capturing the displayed first stored image having the changed resolution and storing the captured displayed image to a second memory context;
comparing the first stored image having the changed resolution to the second stored image having the changed resolution to determine whether the second stored image having the changed resolution is substantially the same as the first stored image having the changed resolution after the change in resolution of the first stored image.

7. The method of Claim 1, whereby the first computer displayable image is a simple pattern image.

8. The method of Claim 1, whereby the first computer displayable image is a text screen.

9. The method of Claim 1, whereby the first computer displayable image is a three dimensional image.

10. A method for automatically testing the video display functionality of a computer video card, comprising:

- writing a text string to a computer display monitor;
- storing an empty bitmap in a first memory location;
- capturing the displayed text string and storing the captured displayed text string in a second memory location;
- writing the text string the empty bitmap in the first memory location;
- comparing the text string written to the empty bitmap to the captured displayed text string; and
- if the text string written to the empty bitmap is different from the captured displayed text string, designating the computer video card as failing a video test.

11. The method of Claim 10, whereby comparing the text string written to the empty bitmap to the captured displayed text string includes comparing the text string written to the empty bitmap to the captured displayed text string on a pixel-by-pixel basis.

12. The method of Claim 11, whereby if any pixel of the text string written to the empty bitmap is different from a corresponding pixel of the captured displayed string, designating the computer video card as failing the video test.

13. A method for automatically testing the video display functionality of a computer video card, comprising:

- displaying a three dimensional image on a computer display monitor according to a first display orientation;
- rotating the three dimensional image on the computer display monitor to a second display orientation;

capturing the three dimensional image displayed according to the second display orientation;

storing the captured three dimensional image to a memory location;

comparing one or more selected pixels of the stored captured three dimensional image to a known color range for the one or more selected pixels; and

if a color of the one or more selected pixels does not fall within the known color range for the one or more selected pixels, designating the computer video card as failing the video test.

14. The method of Claim 13, whereby if the three dimensional image does not rotate to a second display orientation, designating the computer video card as failing an image rotation test.

15. A method for automatically testing an audio video interleaved (AVI) file, comprising:

displaying frames of the AVI file on a computer display monitor;

copying one of the displayed frames as a test frame to a bitmap file in a first memory context;

displaying the bitmap file on the computer display monitor;

capturing the displayed bitmap file and storing the captured displayed bitmap file to a second memory context;

comparing the captured displayed bitmap file in the second memory context to the bitmap file copied to the first memory context on a pixel-by-pixel basis;

if any pixel of the bitmap file copied to the first memory context is different from a corresponding pixel of the bitmap file stored in the second memory context, designating the AVI file as failing a video test.

16. The method of Claim 15, further comprising the steps of:

playing the AVI file to determine whether a set of frames comprising the AVI file are displayed on the computer display monitor successively;

if the set of frames comprising the AVI file are not displayed on the computer display monitor successively, designating the AVI file as failing an AVI operability test.